REMARKS

Claims 1-16 are pending in this application, of which claims 1, 5, 11, and 14 are independent. Applicant acknowledges, with appreciation, the Examiner's indication that claims 3, 7, 10, 12, and 15 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In this Amendment, claims 1, 5, 11, and 14 have been amended to clarify the claimed subject matter. Care has been exercised to avoid the introduction of new matter. Support for the amendments of the claims can be found in, for example, page 10, lines 19-24; and page 11, lines 9-11 of the specification.

Claims 1, 2, 4-6, 8, 9, 11, 13, 14, and 16 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Jayaraman et al. and Corey.

A. Independent Claims 1 and 11

In the statement of the rejection of claim 1, the Examiner admitted that Jayaraman et al. does not teach the claimed download unit, storage, and execution unit. However, the Examiner asserted that Corey teaches the missing features of Jayaraman et al. and concluded that it would have been obvious to modify the system of Jayaraman et al. based on the teachings of Corey to arrive at the claimed subject matter. This rejection is respectfully traversed.

Applicant submits that Jayaraman et al. and Corey, either individually or in combination, do not disclose or suggest a packet transmission apparatus including all the limitations recited in independent claim 1 which reads:

1. A packet transmission apparatus comprising:

> an extraction unit which extracts information from a stream packet to be sent to a terminal, the information indicating a location where an individual program for performing a specific process on the stream is stored;
>
> a download unit which downloads the individual program from the location;
>
> a storage which stores the downloaded individual program; and
>
> an execution unit which executes the individual program by incorporating the individual program into a packet processing on the stream.

The Examiner appears to simply find keywords of the claimed limitations in the prior art references, respectively, and concluded that the references teach the claimed subject matter. However, the applied combination of the references does not teach the requirements of each claimed limitation and the interrelationship between the claimed limitations, as set forth below.

Extraction Unit

In this Amendment, Applicant clarifies that the recitation "which indicates a location where an individual program for performing a specific process on the stream is stored" modifies the "information."

Jayaraman et al. discloses an intelligent content-based router, i.e., a network device that routes packets based on their contents and metrics (see paragraphs [0114], [0080], and [0081]). The Examiner asserted that Jayaraman et al. teaches the claimed extraction unit by referring to paragraph [0157], which is reproduced below (emphasis added):

> The Packet Capture and a Packet Analyzer module enables the unit to capture and extract the data in each packet of a user's request. This data is the content that is routed to the appropriate server at that moment based on a set of metrics. This component of the system intercepts the user's request data stream in the form of packets and then extracts the data content (i.e., the payload) it contains for routing.

It is apparent from the above paragraph that what is extracted by Jayaraman et al. is a data content, i.e., payload, but does not teach that the data content is information indicating a location where an individual program is stored, as claimed.

The Examiner also cited paragraph [0118] to assert that the claimed extraction unit is taught by Jayaraman et al. The paragraph describes, "[t]he extracted data (by the Packet Inspector) is scanned in the Resource Table to locate the server address or addresses and forms the Data Location Table (DL table)." This paragraph does not teach extracting from a stream packet, the information indicating the location where an individual program stored, as claimed. The paragraph simply teaches obtaining a server address and forming a data location table based on that address.

Accordingly, Jayaraman et al. does not teach, among other things, "an extraction unit which extracts information from a stream packet to be sent to a terminal, the information indicating the location where an individual program for performing a specific process of the stream is stored," as recited in independent claim 1.

ii. Download Unit

The Examiner asserted that Corey teaches the claimed download unit. Corey discloses a method and system of delivering audio/video program to one of a number of remote viewing stations based on a program request received from that one of the remote viewing station (see column 2, lines 29-33). What Corey provides is often referred to as video-on-demand services (column 1, lines 16-22). Applicant notes that the term "program" in Corey refers to audio/video data (column 7, line 51), but does not refer to a computer program.

The Examiner cited column 7, lines 39-44 of Corey to assert that the reference teaches the claimed download unit. The paragraph describes that system control unit 218 is responsible for coordinating download from MSF (mass storage facility) 210 to ALSUs (active line storage units) 224 and 226. When requested data (audio/video data) is stored at MSF 210, the data is transferred from MSF 210 to ALSUs 224 and 226 for transmission to a remote viewing station.

Accordingly, Corey does not teach downloading from a location indicated by information extracted from a stream packet, an individual program for performing a specific process on a stream. Corey teaches downloading audio/video data from a fixed location, i.e., MSF 210, but does not download an individual program from a location indicated by information extracted from a stream packet by the extraction unit. Corey mentions the word "downloading," but does not teach the requirement of the claimed download unit.

Therefore, Corey does not teach, among other things, "a download unit which downloads the individual program from the location," as recited in independent claim 1.

iii. Execution Unit

The Examiner, referring to column 4, lines 34-51 of Corey, asserted that the reference teaches the claimed execution unit. Corey simply teaches transmitting stored data from a storage to remote stations while performing functions such as pause, fast-forward, fast-backward, or the like (see step 118 of Fig. 1; and column 3, line 46 to column 4, line 52). It is apparent that Corey does not teach executing the individual program, which is downloaded by the download unit and is stored in the storage, by incorporating the individual program into a packet processing of the stream, as claimed. Applicant stresses that the Examiner overlooked the requirements of the execution unit. Accordingly, Corey does not teach, among other things, "an execution unit which executes the individual program by incorporating the individual program in to a packet processing on the stream," as recited in independent claim 1.

Based on the foregoing, Jayaraman et al. and Corey, either individually or in combination, do not disclose or suggest a packet transmission apparatus including all the limitations recited in independent claim 1. The above discussion is applicable to independent claim 11. Applicant,

therefore, respectfully solicits withdrawal of the rejection of claims 1 and 11, and favorable consideration thereof.

B. Claims 5 and 14

In the statement of the rejection of independent claim 5, the Examiner admitted that Jayaraman et al. does not teach the claimed download unit, storage, and execution unit. However, the Examiner asserted that Corey teaches the missing features of Jayaraman et al. and concluded that it would have been obvious to modify the system of Jayaraman et al. based on the teachings of Corey to arrive at the claimed subject matter. This rejection is respectfully traversed.

Applicant submits that Jayaraman et al. and Corey, either individually or in combination, do not disclose or suggest a packet transmission apparatus including all the limitations recited in independent claim 5, which reads:

> 5. A packet transmission apparatus comprising:
>
> an extraction unit which extracts information from a stream packet to be sent to a terminal, the information indicating a characteristic of the stream data;
>
> a download unit which searches and downloads an individual program suitable for the characteristic;
>
> a storage which stores the downloaded individual program; and
>
> an execution unit which executes the individual program by incorporating the individual program into a packet processing on the stream.

i. Extraction Unit

In this Amendment, Applicant clarifies that the recitation "which indicates a location where an individual program for performing a specific process on the stream is stored" modifies the "information."

The Examiner asserted that Jayaraman et al. teaches the claimed extraction unit by referring to paragraph [0157] which is reproduced below (emphasis added):

> The Packet Capture and a Packet Analyzer module enables the unit to capture and extract the data in each packet of a user's request. This data is the content that is routed to the appropriate server at that moment based on a set of metrics. This component of the system intercepts the user's request data stream in the form of packets and then extracts the data content (i.e., the payload) it contains for routing.

It is apparent from the above paragraph that what is extracted by Jayaraman et al. is a data content, i.e., payload, but does not teach that the data content is information indicating a characteristic of the stream data, as claimed.

The Examiner also cited paragraph [0118] to assert that the claimed extraction unit is taught by Jayaraman et al. The paragraph describes, "[t]he extracted data (by the Packet Inspector) is scanned in the Resource Table to locate the server address or addresses and forms the Data Location Table (DL table). This paragraph does not teach extracting from a stream packet, the information indicating the characteristic of the stream data, as claimed. The paragraph simply teaches obtaining a server address and forming a data location table based on that address.

Accordingly, Jayaraman et al. does not teach, among other things, "an extraction unit which extracts information from a stream packet to be sent to a terminal, the information indicating a characteristic of the stream data," as recited in independent claim 5.

ii. Download Unit

The Examiner cited column 7, lines 39-44 of Corey to assert that the reference teaches the claimed download unit. As discussed above, the paragraph describes that system control unit 218 is responsible for coordinating download from MSF (mass storage facility) 210 to ALSUs (active line storage units) 224 and 226. If requested data (audio/video data) is stored at MSF 210,

the data is transferred from MSF 210 to ALSUs 224 and 226 for transmission to a remote viewing station.

Corey teaches downloading audio/video data from a fixed location, i.e., MSF 210, but does not search and download an individual program suitable for the characteristic, based on the information extracted by the extraction unit, as claimed. According to the claimed subject matter, the location from which the program is downloaded may change based on the extracted information.

Therefore, Corey does not teach, among other things, "a download unit which searches and downloads an individual program suitable for the characteristic," as recited in independent claim 5.

iii. Execution Unit

The Examiner, referring to column 4, lines 34-51 of Corey, asserted that the reference teaches the claimed execution unit. As discussed above, Corey simply teaches transmitting stored data from a storage to remote stations while performing functions such as pause, fast-forward, fast-backward, or the like (see step 118 of Fig. 1; and column 3, line 46 to column 4, line 52). It is apparent that Corey does not teach executing the individual program, which is downloaded by the download unit and is stored in the storage, by incorporating the individual program into a packet processing of the stream, as claimed. Applicant stresses that the Examiner overlooked the requirements of the execution unit in claim 5. Accordingly, Corey does not teach, among other things, "an execution unit which executes the individual program by incorporating the individual program into a packet processing on the stream," as recited in independent claim 5.

Based on the foregoing, Jayaraman et al. and Corey, either individually or in combination, do not disclose or suggest a packet transmission apparatus including all the limitations recited in independent claim 5. The above discussion is applicable to independent claim 14. Applicant, therefore, respectfully solicits withdrawal of the rejection of claims 5 and 14, and favorable consideration thereof.

C. Dependent Claims 2, 6, and 9

Dependent claims 2, 6, and 9 are patentably distinguishable over Jayaraman et al. and Corey at least because these claims include all the limitations recited in independent claims 1 and 5, respectively. Specifically, Applicant argues herein that the applied combination does not teach a packet transmission apparatus including all the limitations recited in claim 2.

Jayaraman et al. does not teach the switch unit of claim 2 which provides the execution unit with a switchover instruction to incorporate the individual program into the packet processing after the download of the individual program is completed. Jayaraman et al. teaches, "the Switching Unit is responsible for the actual redirection of the user's payload," and "the Switching Unit routes the user payload to the selected specific destination" (paragraph [0160]). In short, the claimed switch unit switches from a program to another program to be performed. In contrast, the Switching Unit of Jayaraman et al. switches from a route to another route for transmitting data.

Accordingly, it is apparent that the applied combination of the references does not teach a packet transmission apparatus including all the limitations recited in dependent claim 2. The above discussion is applicable to dependent claims 6 and 9. Withdrawal of the rejection of claims is, therefore, respectfully solicited.

D. Dependent Claims 4, 8, 13, and 16

Dependent claims 4, 8, 13, and 16 are patentably distinguishable over Jayaraman et al. and Corey at least because these claims include all the limitations recited in independent claims 1, 5, 11, and 14, respectively. Applicant specifically argues that the applied combination of the references does not teach a packet transmission apparatus including all the limitations recited in dependent claim 4.

According to Corey, when the requested data is stored at the ALSU (active line storage unit), the stored data is transmitted from the ALSU to a remote viewing station (column 5, lines 11-16 and lines 22-26). In contrast, claim 4 requires that when the information extracted by the extraction unit has been already stored in the storage (the individual program has already been stored in the storage in association with the information), then the packet processing is performed using the individual program stored in the storage. Corey merely describes an operation based on whether data to be sent is available, but does not teach an operation based on whether a program to be performed is available.

Accordingly, it is apparent that the applied combination of the references does not teach a packet transmission apparatus including all the limitations recited in dependent claim 4. The above discussion is applicable to dependent claims 8, 13, and 16. Withdrawal of the rejection of claims is, therefore, respectfully solicited.

Conclusion

It should, therefore, be apparent that the imposed rejections have been overcome and that all pending claims are in condition for immediate allowance. Favorable consideration is, therefore, respectfully solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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